

Appl. No. 10/777,204
Amdt dated April 18, 2006
Reply to Office action of February 22, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (Cancelled)

Claim 8. (Previously Presented) An apparatus for supporting a biofilm in a liquid comprising:

a) a plurality of gas permeable, water impermeable, hollow fibers, each hollow fiber having a lumen, an outer surface and an open end; and,

b) a header, the header having a cavity and a port open to the cavity,

wherein the hollow fibers extend from the header, with the outer surfaces of the open ends of the hollow fibers sealed to the header and the lumens of the hollow fibers communicating with the port through the cavity, and

wherein the hollow fibers extend along their length generally in a first direction and further comprising second fibers extending along their length generally in a second direction, the second direction being perpendicular to the first direction.

Claim 9. (Previously Presented) The apparatus of claim 8 wherein the hollow fibers and second fibers form a fabric.

Claim 10. (Previously Presented) The apparatus of claim 9 wherein the fabric is generally continuous across the length of the hollow fibers.

Claims 11-13 (Cancelled)

Claim 14. (Previously Presented) An apparatus for supporting a biofilm in a liquid comprising:

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a) a plurality of gas permeable, water impermeable, hollow fibers, each hollow fiber having a lumen, an outer surface and an open end; and,

b) a header, the header having a cavity and a port open to the cavity,

wherein the hollow fibers extend from the header, with the outer surfaces of the open ends of the hollow fibers sealed to the header and the lumens of the hollow fibers communicating with the port through the cavity,

and wherein the hollow fibers have second open ends, the second open ends of the hollow fibers are potted in a second header, the second open ends communicate with a second port of the second header through a second cavity of the second header and the header and the second header are spaced apart from each other and the hollow fibers are arranged into one or more fabric sheets extending between the headers.

Claim 15. (Previously Presented) The apparatus of claim 14 wherein the fabric sheets are generally parallel to each other.

Claim 16. (Previously Presented) The apparatus of claim 15 wherein adjacent fabric sheets have a spacing between them of between 3 mm and 15 mm.

Claim 17. (Previously Presented) The apparatus of claim 16 further comprising spacers between the fabric sheets outside of the header.

Claim 18. (Previously Presented) The apparatus of claim 14 wherein the fabric sheets are woven.

Claim 19. (Previously Presented) The apparatus of claim 14 having an oxygen transfer efficiency of 50 % or more.